Amendments to the Claims

The following listing of claims is intended to replace all prior versions of claims in the application and includes all claims now active in the application, along with the status of each. In this listing, insertions are underlined, as follows: <u>inserted text</u>. Deletions are struck through in bold type, as follows: **deleted text**, or indicated with double square brackets in cases where strikethrough text is difficult to see, as follows: [[4]].

1. (Original)   A communications network 100 comprising a plurality of nodes including at least one earth station 14, 16 and at least one spacecraft 12, wherein said spacecraft 12 comprises an active node of said network 100.

2. (Original)   The network 100 of claim 1 wherein said spacecraft active node 12 includes a physical layer 312 and a link layer 314 conforming to a protocol of an OSI reference model.

3. (Original)   The network 100 of claim 2 wherein said spacecraft active node 12 further includes a network layer 316 conforming to an OSI reference model.

4. (Original)   The network 100 of claim 3 wherein said spacecraft active node 12 further includes a transport layer 318 conforming to an OSI reference model.

5. (Original)   The network 100 of claim 4 wherein said spacecraft active node 12 further includes an application layer 320 conforming to an OSI reference model.

6. (Original)   The network 100 of claim 1 wherein said spacecraft active node 12 comprises a node operating system (nodeOS) and at least one execution environment (EE).

7. (Original) The network 100 of claim 1 including a terrestrial data link 19.

8. (Original) The network 100 of claim 7 wherein said terrestrial data link 19 comprises a Public Switched Telephone Network.

9. (Original) The network 100 of claim 7 wherein said terrestrial data link 19 comprises a wireless data link.

10. (Original) The network 100 of claim 1 wherein said earth station 14, 16 is configured to transmit at least one object 210 to said spacecraft active node 12.

11. (Original) The network 100 of claim 2 wherein said physical layer 312 and said link layer 314 of said spacecraft active node 12 are configured to communicate with said earth station node 14, 16 using a TCP/IP transmission protocol.

12. (Original) The network 100 of claim 11 wherein TCP/IP protocol is transmitted using ATM techniques.

13. (Original) A method for dynamically configuring a spacecraft to function as an active node of a communications network, the method comprising the steps of transmitting an object from an earth station to said spacecraft, said object comprising at least one method for configuring said spacecraft to include a node operating system and at least one execution environment.

14. (Original) A method for dynamically configuring a spacecraft to communicate over a network comprising at least one earth station and at least one spacecraft in accordance with an OSI reference model, the method comprising the steps of: transmitting an object from a node selected from the group consisting of an earth station and a spacecraft, to said spacecraft, said object comprising data

conforming to at least one protocol, and at least one method comprising

executable code for implementing said protocol of said data;

at said spacecraft, receiving said object;

at said spacecraft, extracting at least said executable code from said object;

at said spacecraft, temporarily storing at least said executable code in memory;

at said spacecraft, executing said code for implementing at least one layer of an

OSI reference model.

15. (Original) The method according to claim 14 wherein said at least one layer
comprises a physical layer and a data link layer.

16. (Original) The method according to claim 14 wherein said at least one layer
comprises a network layer.

17. (Original) The method according to claim 14 wherein said at least one layer
comprises a transport layer.

18. (Original) The method according to claim 14 wherein said at least one layer
comprises an application layer.

19. (Original) The method according to claim 14 wherein the step of executing said
executable code includes the step of adapting said network layer for at least one of
internet protocol and asynchronous transfer mode protocol.

20. (Currently Amended)   A method according to claim [[1]] 14, wherein said step of
executing said executable code includes at least one of the steps of data fusion and
packet dropping.

21. (Original) A communications network 100 including at least one spacecraft node 12
and at least one earth station node 14,16, wherein said earth station node 14 is

configured to transmit to said spacecraft node 12 at least one object 210 comprising data 212 and a protocol 214 associated with said data 212, said protocol including information defining at least one node 16 of said network 100 to which said data 212 is to be forwarded from said spacecraft node 12.